



DIGITAL RECORDER

RS232 PROTOCOL

MODEL

DX-TL800E120



THIS INSTRUCTION MANUAL IS IMPORTANT TO YOU. PLEASE READ IT BEFORE USING YOUR DIGITAL RECORDER.

ENGLISH

OTHERS

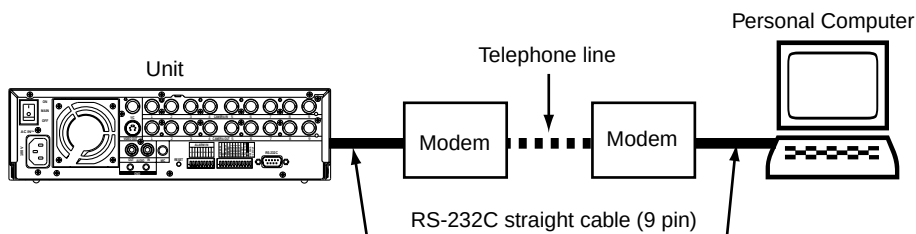
Connecting to a personal computer

■ Connecting with a personal computer

This unit can be remote controlled from a PC equipped with a RS-232C connection. It is also possible to input comments from a PC for recording comment information along with the video.

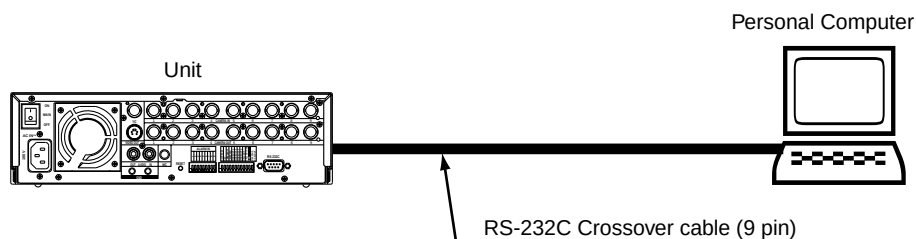
◆ Connection via modem

Please use RS-232C Straight cable (9pin) to connect a modem with this unit. The setting of CTS should be set to "HIGH" or "ON". Please refer to the instruction manual of a modem for details about connection.

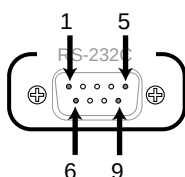


◆ Direct connection

Please use RS-232C Crossover cable (9pin) to connect a modem with a personal computer. RS -232C Crossover cable differs depending on the personal computer.



◆ RS-232C Terminal

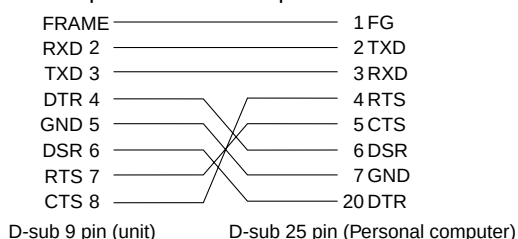


Pin NO.	Letters	Transmission Contents	Pin NO.	Letters	Transmission Contents
2	RXD	Receiving Data	6	DSR	Data Set Ready
3	TXD	Transmission Data	7	RTS	Request To Send
4	DTR	Data Terminal Ready	8	CTS	Clear To Send
5	GND	Signal Ground			

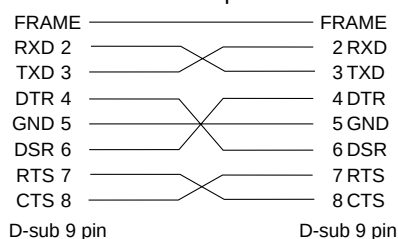
◆ RS-232C Cable

Please use the following RS-232C Crossover cable to connect your personal computer to the unit.

1) When RS-232C terminal of personal computer is D-sub 25 pin



2) When Personal computers RS-232C terminal is D-sub 9 pin



■ RS-232C settings

Communication related settings of this unit are made in "MODE" and "SETTINGS" of the <RS-232C> screen. Perform settings so that they are the same as the connecting modem or PC.

❗ When remote controlling this unit from a PC, set "MODE" in the <RS-232C> screen to "REMOTE A" (status condition change information is returned from the unit) or "REMOTE B" (status condition change information is not returned from the unit).

Available settings on unit

Synchronization	Name on Menu	Asynchronous
1 Transmission rate at the data received/sent	TRANSMISSION RATE	1200/2400/4800/9600/19200
2 Data bit length	DATA BIT LENGTH	8 BIT/7 BIT
3 Parity bit setting	PARITY BIT	NONE/ODD/EVEN
4 Stop bit length	STOP BIT	1 BIT/2 BIT
5 Line feed setting	DELIMITER	CR/CR•LF

Perform the following settings on the PC

Synchronization	Name on Menu
1 X control	Not available
2 S parameter	Not available
3 CS-RS hand-shake	Available

■ Command code system

2 types of command codes of "direct operation specification" and "false operation panel" can be selected according to the purpose of the unit.

■ Description of command code systems

♦ Direct operation specification

Control and settings are performed by checking execution, errors, etc., from the status returned from the unit for the command sent from the PC. This command type is structured by operation setting type commands that sets operations and menu setting type commands that directly sets various menus.

• Input format

Operation setting type commands are to be sent from the PC for each operation such as power on/off, record, playback, etc., for the unit.

Menu setting type commands are to be specified for each menu setting of the unit.

As a general rule, do not send commands continuously, but send the next command after checking that the present command has been executed and completed.

• Response format

After sending a command, the following items can be checked from the status returned from the unit.

- 1) Command execution result, error type, command name, operation status.
- 2) For operation setting type commands, the operation mode of the unit can be distinguished by the mode number of the returned status.

Distinction cannot be made with menu setting type commands. (Mode number is notified only when there is change is status.)

Example) Turn the Unit ON.

Command from PC	Replied status code from unit to PC	Meaning
PW1 [#1]		Indicates POWER ON command has been sent.
	RC [#2]	Indicates that the unit has received a command.
	EX,00PW1,03 [#2]	EX : Indicates that a command has been executed. 00 : Indicates that the execution was successful. PW1 : Indicates response to POWER ON command. 03 : Indicates POWER ON status.

❗ When the unit cannot execute the operation setting type command or menu setting command sent from a PC, the content is displayed in the error type of the status returned from the unit. Check the error code and take appropriate measures.

❗ For control type commands such as record, playback, etc., the interval between command transmission and the actual operation (command execution) may take some time. To prevent the gap between operation and actual execution, read the status after sending the command and check the transition of the actual execution.

◆ False operation panel command type

Operations can be specified from a PC as if operating the actual operation panel of the unit while viewing the output video. Each command is a command type that corresponds to the operation button of the unit.

• Input confirmation type

Send commands as if operate the buttons, JOG dial and SHUTTLE ring of the operation panel. As a general rule, do not send commands continuously, but send the next command after checking that the present command has been executed and completed. After sending a command, the command execution result, error type and command name can be checked by the status returned from the unit. To check the actual execution, view the output screen of the unit on the monitor screen.

Example) Recorded data is played back using still-frames.

Command from PC	Replied status code from unit to PC	Meaning
KKP0 [#1]		Indicates that a command equivalent to "push the POWER button" was sent.
	RC [#2]	Indicates that the unit has received a command.
	EX,00KKP0 [#2]	EX : Indicates that a command has been executed. 00 : Indicates that the execution was successful. KKP0 : Indicates that the POWER button was operated.
KKB1 [#1]		Indicates that a command equivalent to "push the PLAY button" was sent.
	PC [#2]	Indicates that the unit has received a command.
	EX,00KKB1 [#2]	EX : Indicates that a command has been executed. 00 : Indicates that the execution was successful. KKB1 : Indicates that the PLAY button was operated.
KKB4 [#1]		Indicates that a command equivalent to "push the PAUSE button" was sent.
	PC [#2]	Indicates that the unit has received a command.
	EX,00KKB4 [#2]	EX : Indicates that a command has been executed. 00 : Indicates that the execution was successful. KKB4 : Indicates that the PAUSE button was operated.

❗ When using shuttle operation commands, be sure to send the shuttle center command after sending the operation command. Otherwise, the shuttle operation will be kept until the shuttle center command is sent.

❗ For control type commands such as record, playback, etc., the interval between command transmission and the actual operation (command execution) may take some time. To prevent the gap between operation and actual execution, read the status after sending the command and check the transition of the actual execution.

◆ Status condition change information function

Example) Status condition change information of system mode and POWER ON is issued.

Replied status code from unit to PC	Meaning
EX,AA,0103 [#2]	EX : Indicates that a command has been executed. AA : Indicates that status condition change information. 0103 : Indicates that status condition of POWER ON.

When setting "MODE" (see page 41) to "REMOTE A", a status condition change information is sent to the PC when there is change in the unit status. The notification is not sent when setting to "REMOTE B".

◆ Command receive confirmation function

After executing a received command, the error type during command execution is notified after execution status "EX".

Error type	Contents of Error
00	Normal
01	Execute Error
02	Execute Unable Error
03	Incorrect command
04	Incorrect parameter
05	Excuting the command
06	Not corresponding

Command Codes

• RS-232C [Direct operation specification] operation setting system command form (Continued)

Commands name	Commands	Status	Notes
Comment search	PB★★ ⁽¹⁾ ★★ ⁽²⁾ ★★ ⁽³⁾ ★★ ⁽⁴⁾ ★★ ⁽⁵⁾ ★★★★★★★★★★★★ ★★★★★★★★★★★★★★ ★★ ⁽⁶⁾ #1	RC #2 EX,★★ ⁽⁷⁾ PB★★ ⁽¹⁾ ★★ ⁽²⁾ ★★ ⁽³⁾ ★★ ⁽⁴⁾ ★★ ⁽⁵⁾ ★★★★★★★★★★★★ ★★★★★★★★★★★★★★ ★★ ⁽⁶⁾ ,★★ ⁽⁸⁾ #2	★★ ⁽¹⁾ : Comment search (80) ★★ ⁽²⁾ : Search direction 00 : Forward 01 : Reverse ★★ ⁽³⁾ : number of search time (01 ~ 99) ★★ ⁽⁴⁾ : Camera number 00 : CH1 01 : CH2 02 : CH3 03 : CH4 04 : CH5 05 : CH6 06 : CH7 07 : CH8 08 : CH9 ★★ ⁽⁵⁾ : Character size (00 - 32) ★★★★★★★★★★★★★★★★ ★★ ⁽⁶⁾ : Comment ★★ ⁽⁷⁾ : Error type ★★ ⁽⁸⁾ : Playback mode number (refer to Playback mode)
Switcher	SW★★★★ ⁽¹⁾ #1	RC #2 EX,★★ ⁽²⁾ SW★★★★ ⁽¹⁾ ,★★ ⁽³⁾ #2	★★★★ ⁽¹⁾ : Switcher command 0101 : CH1 0102 : CH2 0103 : CH3 0104 : CH4 0105 : CH5 0106 : CH6 0107 : CH7 0108 : CH8 0109 : CH9 0180 : zoom cancel 0181 : zoom 0182 : twice zoom 0184 : four times zoom 0191 : zoom move above 0192 : zoom move down 0193 : zoom move right 0194 : zoom move left 0400 : split 4 screen sequential 0401 : 4(a) 0402 : 4(b) 0403 : 4(c) 0901 : 9a ★★ ⁽²⁾ : Error type <Case of during playback> ★★ ⁽³⁾ : Playback mode number during playback, display mode number during another condition. Playback mode number : refer to playback mode <Case of another condition> ★★ ⁽³⁾ : Display mode number 03 : single screen 04 : split display 05 : zoom 07 : display error
Timer	TM★ ⁽¹⁾ #1	RC #2 EX,★★ ⁽²⁾ TM★ ⁽¹⁾ ,★★ ⁽³⁾ #2	★ ⁽¹⁾ : Timer recording ON/OFF 0 : Timer off 1 : Timer on ★★ ⁽²⁾ : Error type ★★ ⁽³⁾ : Timer mode number 00 : Timer off 01 : Timer on 02 : Timer error
Alarm interrupt	AD★ ⁽¹⁾ #1	RC #2 EX,★★ ⁽²⁾ AD★ ⁽¹⁾ ,★★ ⁽³⁾ #2	★ ⁽¹⁾ : Alarm interrupt setting 0 : Alarm interrupt off 1 : Alarm interrupt on ★★ ⁽²⁾ : Error type ★★ ⁽³⁾ : Alarm disable mode number 00 : Alarm disable off 01 : Alarm disable on
Copy	CP★ ⁽¹⁾ #1	RC #2 EX,★★ ⁽²⁾ CP★ ⁽¹⁾ ,★★ ⁽³⁾ #2	★ ⁽¹⁾ : Copy STOP/START 0 : STOP 1 : START ★★ ⁽²⁾ : Error type ★★ ⁽³⁾ : Copy mode number 00 : Stop 02 : Execute 04 : Copy error
Restore	RP★ ⁽¹⁾ #1	RC #2 EX,★★ ⁽²⁾ RP★ ⁽¹⁾ ,★★ ⁽³⁾ #2	★ ⁽¹⁾ : Restore STOP/START 0 : STOP 1 : START ★★ ⁽²⁾ : Error type ★★ ⁽³⁾ : Restore mode number 00 : Stop 02 : Execute 04 : Restore error
Acquire the recorded period	IF★★ ⁽¹⁾ #1	RC #2 EX,★★ ⁽²⁾ IF★★ ⁽¹⁾ ,★★ ⁽³⁾ ,★★ ⁽⁴⁾ ★★ ⁽⁵⁾ ★★ ⁽⁶⁾ ★★ ⁽⁷⁾ ★★ ⁽⁸⁾ ★★ ⁽⁹⁾ ★★ ⁽¹⁰⁾ ★★ ⁽¹¹⁾ ★★ ⁽¹²⁾ ,★★ ⁽¹³⁾ ★★ ⁽¹⁴⁾ ★★ ⁽¹⁵⁾ ★★★★★ ⁽¹⁶⁾ #2	★★ ⁽¹⁾ : Acquire the recorded period 0 : Main 1 : Copy ★★ ⁽²⁾ : Error type ★★ ⁽³⁾ : Acquire the information mode number 00 : Done 02 : Acquire information error ★★ ⁽⁴⁾ : Start year ★★ ⁽⁵⁾ : Start month ★★ ⁽⁶⁾ : Start day ★★ ⁽⁷⁾ : Start hour ★★ ⁽⁸⁾ : Start minute ★★ ⁽⁹⁾ : Start second ★★ ⁽¹⁰⁾ : End year ★★ ⁽¹¹⁾ : End month ★★ ⁽¹²⁾ : End day ★★ ⁽¹³⁾ : End hour ★★ ⁽¹⁴⁾ : End minute ★★ ⁽¹⁵⁾ : End second ★★★★★ ⁽¹⁶⁾ : Number of alarm list
Warning reset	WC★ ⁽¹⁾ #1	RC #2 EX,★★ ⁽²⁾ WC★ ⁽¹⁾ ,★★ ⁽³⁾ #2	★ ⁽¹⁾ : Warning reset 0 : Reset (only display) ★★ ⁽²⁾ : Error type ★★ ⁽³⁾ : System mode number (refer to Power ON/OFF command)
Menu initializing, loading or saving	MC★ ⁽¹⁾ #1	RC #2 EX,★★ ⁽²⁾ MC★ ⁽¹⁾ ,★★ ⁽³⁾ #2	★ ⁽¹⁾ : Menu initializing, loading or saving 0 : Initialize 1 : Load 2 : Save ★★ ⁽²⁾ : Error type ★★ ⁽³⁾ : System mode number (refer to Power ON/OFF command)
Delete the data	CL★★ ⁽¹⁾ #1	RC #2 EX,★★ ⁽²⁾ CL★★ ⁽¹⁾ ,★★ ⁽³⁾ #2	★★ ⁽¹⁾ : Delete the data 01 : Main 03 : Copy ★★ ⁽²⁾ : Error type ★★ ⁽³⁾ : Data delete mode number 00 : Done 02 : Data delete error

• RS-232C [Direct operation specification] menu setting system command form

<TIME DATE/DISPLAY SETTINGS>

Menu	Commands	Status	Notes
TIME DATE ADJUST	<Menu setting> DW,***** ⁽¹⁾ ***** ⁽²⁾ #1 <Inquiry for setting information> DR,***** ⁽¹⁾ #1	<Writing of menu information> RC #2 EX, ** ⁽³⁾ DW,***** ⁽¹⁾ ***** ⁽²⁾ #2 <Reading of menu information> RC #2 EX, ** ⁽³⁾ DR,***** ⁽¹⁾ ***** ⁽²⁾ #2	***** ⁽¹⁾ : 00048 : Time (Year) 00049 : Time (Month) 00050 : Time (Day) 00053 : Time (Hour) 00054 : Time (Minute) 00055 : Time (Second) ***** ⁽²⁾ : 00001 ~ 00099 : Time (Year) 00001 ~ 00012 : Time (Month) 00001 ~ 00031 : Time (Day) 00001 ~ 00023 : Time (Hour) 00000 ~ 00059 : Time (Minute) 00000 ~ 00059 : Time (Second) ** ⁽³⁾ : Error type
DISPLAY MODE	↑	↑	***** ⁽¹⁾ : 00033 ***** ⁽²⁾ : 00001 ~ 00006 ** ⁽³⁾ : Error type
CLOCK LOCATION SETTING	↑	↑	***** ⁽¹⁾ : 00034 ***** ⁽²⁾ : 00000 ~ 00383 ** ⁽³⁾ : Error type
CAMERA DISPLAY	↑	↑	***** ⁽¹⁾ : 00035 ***** ⁽²⁾ : 00000 ~ 00003 00000 : NONE 00001 : NUMBER 00002 : TITLE 00003 : COMMENT ** ⁽³⁾ : Error type
CAMERA TITLE/ MEMO SETTING	<Menu setting> DW02,***** ⁽¹⁾ ***** ⁽²⁾ <Inquiry for setting information> DR02,***** ⁽¹⁾	<Writing of menu information> RC #2 EX, ** ⁽³⁾ DW02,***** ⁽¹⁾ ***** ⁽²⁾ #2 <Reading of menu information> RC #2 EX, ** ⁽³⁾ DR02,***** ⁽¹⁾ ***** ⁽²⁾ #2	***** ⁽¹⁾ : CH1 : 00080 ~ 00095 CH2 : 00096 ~ 00111 CH3 : 00112 ~ 00127 CH4 : 00128 ~ 00143 CH5 : 00144 ~ 00159 CH6 : 00160 ~ 00175 CH7 : 00176 ~ 00191 CH8 : 00192 ~ 00207 CH9 : 00208 ~ 00223 Memo : 05329 ~ 05344 ***** ⁽²⁾ : (Refer to CHARACTER CODE LIST) ** ⁽³⁾ : Error type
DUPLEX MODE DISPLAY	<Menu setting> DW,***** ⁽¹⁾ ***** ⁽²⁾ #1 <Inquiry for setting information> DR,***** ⁽¹⁾ #1	<Writing of menu information> RC #2 EX, ** ⁽³⁾ DW,***** ⁽¹⁾ ***** ⁽²⁾ #2 <Reading of menu information> RC #2 EX, ** ⁽³⁾ DR,***** ⁽¹⁾ ***** ⁽²⁾ #2	***** ⁽¹⁾ : 05282 ***** ⁽²⁾ : 00000 : NONE 00001 : TOP 00002 : BOTTOM ** ⁽³⁾ : Error type
DAYLIGHT SAVING	↑	↑	***** ⁽¹⁾ : 00052 ***** ⁽²⁾ : 00000 : OUT 00001 : IN ** ⁽³⁾ : Error type

Command codes (continued)

• RS-232C [Direct operation specification] menu setting system command form

<MPX DISPLAY SETTINGS>

Menu	Commands	Status	Notes
SPLIT 4 SCREEN SETTING	<Menu setting> DW,***** ⁽¹⁾ ***** ⁽²⁾ [F1] <Inquiry for setting information> DR,***** ⁽¹⁾ [F1]	<Writing of menu information> RC [F2] EX,★★ ⁽³⁾ DW,***** ⁽¹⁾ ***** ⁽²⁾ [F2] <Reading of menu information> RC [F2] EX,★★ ⁽³⁾ DR,***** ⁽¹⁾ ***** ⁽²⁾ [F2]	SPLIT 4(a) ***** ⁽¹⁾ : 00368 ~ 00371 00368 : Top - left 00369 : Top - right 00370 : Bottom - left 00371 : Bottom - right SPLIT 4(b) ***** ⁽¹⁾ : 00384 ~ 00387 00384 : Top - left 00385 : Top - right 00386 : Bottom - left 00387 : Bottom - right SPLIT 4(c) ***** ⁽¹⁾ : 00400 ~ 00403 00400 : Top - left 00401 : Top - right 00402 : Bottom - left 00403 : Bottom - right ***** ⁽²⁾ : 00000 ~ 00008 00000 : CH1 00001 : CH2 00002 : CH3 00004 : CH4 00005 : CH5 00005 : CH6 00006 : CH7 00007 : CH8 00008 : CH9 ★★ ⁽³⁾ : Error type
SPLIT 9 SCREEN SETTING	↑	↑	SPLIT 9 ***** ⁽¹⁾ : 00432 ~ 00440 00432 : Top - left 00433 : Top - middle 00434 : Top - right 00435 : Middle - left 00436 : Middle - middle 00437 : Middle - right 00438 : Bottom - left 00439 : Bottom - middle 00440 : Bottom - right ***** ⁽²⁾ : 00000 ~ 00008 00000 : CH1 00001 : CH2 00002 : CH3 00004 : CH4 00005 : CH5 00005 : CH6 00006 : CH7 00007 : CH8 00008 : CH9 ★★ ⁽³⁾ : Error type
SEQUENCE SETTING SEQ. - CH.	↑	↑	***** ⁽¹⁾ : 00480 ~ 00488 00480 : 1 00481 : 2 00482 : 3 00483 : 4 00484 : 5 00485 : 6 00486 : 7 00487 : 8 00488 : 9 ***** ⁽²⁾ : 00000 ~ 00008 00000 : CH1 00001 : CH2 00002 : CH3 00004 : CH4 00005 : CH5 00005 : CH6 00006 : CH7 00007 : CH8 00008 : CH9 ★★ ⁽³⁾ : Error type
SEQUENCE SETTING SPLIT 4 SETTING	↑	↑	***** ⁽¹⁾ : 00489 ***** ⁽²⁾ : 00001 : 4ab 00002 : 4abc ★★ ⁽³⁾ : Error type
SEQUENCE SETTING TIME SETTING	↑	↑	***** ⁽¹⁾ : 00512 ~ 00521 00512 : SEQ. 1 00513 : SEQ. 2 00514 : SEQ. 3 00515 : SEQ. 4 00516 : SEQ. 5 00517 : SEQ. 6 00518 : SEQ. 7 00519 : SEQ. 8 00520 : SEQ. 9 00521 : SPLIT 4 ***** ⁽²⁾ : 00000 ~ 00030 (second) ★★ ⁽³⁾ : Error type
INTERLASE	↑	↑	***** ⁽¹⁾ : 00339 ***** ⁽²⁾ : 00000 : OFF 00001 : ON ★★ ⁽³⁾ : Error type
COVERT CAMERA SETTING	↑	↑	***** ⁽¹⁾ : 00528 ~ 00536 00528 : 1 00529 : 2 00530 : 3 00531 : 4 00532 : 5 00533 : 6 00534 : 7 00535 : 8 00536 : 9 ***** ⁽²⁾ : 00000 : OFF 00001 : ON ★★ ⁽³⁾ : Error type
ALARM DISPLAY	↑	↑	***** ⁽¹⁾ : 00544 ***** ⁽²⁾ : 00000 : OFF 00001 : ON ★★ ⁽³⁾ : Error type

• RS-232C [Direct operation specification] menu setting system command form

<MOTION DETECTION SETTINGS>

Menu	Commands	Status	Notes
SELECTION CAMERA NUMBER	<Menu setting> DW,***** ⁽¹⁾ ***** ⁽²⁾ [#1] <Inquiry for setting information> DR,***** ⁽¹⁾ [#1]	<Writing of menu information> RC [#2] EX,*** ⁽³⁾ DW,***** ⁽¹⁾ ***** ⁽²⁾ [#2] <Reading of menu information> RC [#2] EX,*** ⁽³⁾ DR,***** ⁽¹⁾ ***** ⁽²⁾ [#2]	***** ⁽¹⁾ : 00576 ~ 00584 00576 : CH1 00577 : CH2 00578 : CH3 00579 : CH4 00580 : CH5 00581 : CH6 00582 : CH7 00583 : CH8 00585 : CH9 ***** ⁽²⁾ : 00000 : OFF 00001 : ON *** ⁽³⁾ : Error type
DETECTION MASK SETTING	↑	↑	***** ⁽¹⁾ : 00656 ~ 02383 00656 ~ 00847 : CH1 00848 ~ 01039 : CH2 01040 ~ 01231 : CH3 01232 ~ 01423 : CH4 01424 ~ 01615 : CH5 01616 ~ 01807 : CH6 01808 ~ 01999 : CH7 02000 ~ 02191 : CH8 02192 ~ 02383 : CH9 ***** ⁽²⁾ : 00000 : OFF 00001 : ON *** ⁽³⁾ : Error type
SENSITIVITY	↑	↑	***** ⁽¹⁾ : 00608 ~ 00616 00608 : CH1 00609 : CH2 00610 : CH3 00611 : CH4 00612 : CH5 00613 : CH6 00614 : CH7 00615 : CH8 00616 : CH9 ***** ⁽²⁾ : 00000 ~ 00004 00000 : HIGH • • • • LOW 00001 : HIGH • • • • < LOW 00002 : HIGH • • • < < LOW 00003 : HIGH • • • < < < LOW 00004 : HIGH < < < < LOW *** ⁽³⁾ : Error type
MOTION THRESHOLD	↑	↑	***** ⁽¹⁾ : 00624 ~ 00632 00624 : CH1 00625 : CH2 00626 : CH3 00627 : CH4 00628 : CH5 00629 : CH6 00630 : CH7 00631 : CH8 00632 : CH9 ***** ⁽²⁾ : 00001 ~ 00192 (POINT) *** ⁽³⁾ : Error type

Command codes (continued)

• RS-232C [Direct operation specification] menu setting system command form

<RECORD SETTINGS>

Menu	Commands	Status	Notes
RECORD SETTING PPS	<Menu setting> DW,***** ⁽¹⁾ ***** ⁽²⁾ [#1] <Inquiry for setting information> DR,***** ⁽¹⁾ [#1]	<Writing of menu information> RC [#2]EX,★★ ⁽³⁾ DW,***** ⁽¹⁾ ***** ⁽²⁾ [#2] <Reading of menu information> RC [#2]EX,★★ ⁽³⁾ DR,***** ⁽¹⁾ ***** ⁽²⁾ [#2]	***** ⁽¹⁾ : 04032 ~ 04040 04032 : CH1 04033 : CH2 04034 : CH3 04035 : CH4 04036 : CH5 04037 : CH6 04038 : CH7 04039 : CH8 04040 : CH9 ***** ⁽²⁾ : 65535 : - - - - - 00001 : 25P 00002 : 12.5P 00003 : 8.333P 00004 : 6.25P 00005 : 5P 00006 : 4.167P 00008 : 3.125P 00010 : 2.5P 00025 : 1P 00050 : 0.5P 00100 : 0.25P 00200 : 0.125P ★★ ⁽³⁾ : Error type
RECORD SETTING GRADE	↑	↑	***** ⁽¹⁾ : 04064 ~ 04072 04064 : CH1 04065 : CH2 04066 : CH3 04067 : CH4 04068 : CH5 04069 : CH6 04070 : CH7 04071 : CH8 04072 : CH9 ***** ⁽²⁾ : 00000 : SUPER 00001 : HIGH 00002 : STD(STANDARD) 00003 : BASIC 00004 : LONG ★★ ⁽³⁾ : Error type
RECORD SETTING A-PPS	↑	↑	***** ⁽¹⁾ : 04048 ~ 04056 04048 : CH1 04049 : CH2 04050 : CH3 04051 : CH4 04052 : CH5 04053 : CH6 04054 : CH7 04055 : CH8 04056 : CH9 ***** ⁽²⁾ : 65535 : - - - - - 00001 : 25P 00002 : 12.5P 00003 : 8.333P 00004 : 6.25P 00005 : 5P 00006 : 4.167P 00008 : 3.125P 00010 : 2.5P 00025 : 1P 00050 : 0.5P 00100 : 0.25P 00200 : 0.125P ★★ ⁽³⁾ : Error type
RECORD SETTING A-GRADE	↑	↑	***** ⁽¹⁾ : 04080 ~ 04088 04080 : CH1 04081 : CH2 04082 : CH3 04083 : CH4 04084 : CH5 04085 : CH6 04086 : CH7 04087 : CH8 04088 : CH9 ***** ⁽²⁾ : 00000 : SUPER 00001 : HIGH 00002 : STD(STANDARD) 00003 : BASIC 00004 : LONG ★★ ⁽³⁾ : Error type
RECORD SETTING ALARM MODE	↑	↑	***** ⁽¹⁾ : 05283 ***** ⁽²⁾ : 00000 : ALL 00001 : ALARM 00002 : ALARM PLUS ★★ ⁽³⁾ : Error type
RECORD SETTING ALARM REC DURATION	↑	↑	***** ⁽¹⁾ : 03985 ***** ⁽²⁾ : 00000 ~ 03600 00000 : MANUAL 00002 : 2S 00005 : 5S 00010 : 10S 00015 : 15S 00030 : 30S 00045 : 45S 00060 : 1M 00120 : 2M 00300 : 5M 00600 : 10M 01200 : 20M 01800 : 30M 03600 : 60M ★★ ⁽³⁾ : Error type
RECORD SETTING PRE ALARM REC	↑	↑	***** ⁽¹⁾ : 03986 ***** ⁽²⁾ : 00001 ~ 00003,00255 00001 : SHORT 00002 : MEDIUM 00003 : LONG 00255 : OFF ★★ ⁽³⁾ : Error type

• RS-232C [Direct operation specification] menu setting system command form

<TIMER PROGRAM SETTINGS>

Menu	Commands	Status	Notes
SELECTED PATTERN	<Menu setting> DW,***** ⁽¹⁾ ***** ⁽²⁾ ^[#1] <Inquiry for setting information> DR,***** ⁽¹⁾ ^[#1]	<Writing of menu information> RC ^[#2] EX,*** ⁽³⁾ DW,***** ⁽¹⁾ ***** ⁽²⁾ ^[#2] <Reading of menu information> RC ^[#2] EX,*** ⁽³⁾ DR,***** ⁽¹⁾ ***** ⁽²⁾ ^[#2]	***** ⁽¹⁾ : 04112 ***** ⁽²⁾ : 00000 : P1 00001 : P2 00002 : P3 *** ⁽³⁾ : Error type
TIMER PROGRAM	<Menu setting> DW01,*** ⁽¹⁾ ***** ⁽²⁾ ***** ⁽³⁾ ***** ⁽⁴⁾ ***** ⁽⁵⁾ ***** ⁽⁶⁾ ***** ⁽⁷⁾ ***** ⁽⁸⁾ ^[#1] <Inquiry for setting information> DR01,*** ⁽¹⁾ ^[#1]	<Writing of menu information> RC ^[#2] EX,*** ⁽⁹⁾ DW01,*** ⁽¹⁾ ***** ⁽²⁾ ***** ⁽³⁾ ***** ⁽⁴⁾ ***** ⁽⁵⁾ ***** ⁽⁶⁾ ***** ⁽⁷⁾ ***** ⁽⁸⁾ ^[#2] <Reading of menu information> RC ^[#2] EX,*** ⁽⁹⁾ DR01,*** ⁽¹⁾ ***** ⁽²⁾ ***** ⁽³⁾ ***** ⁽⁴⁾ ***** ⁽⁵⁾ ***** ⁽⁶⁾ ***** ⁽⁷⁾ ***** ⁽⁸⁾ ^[#2]	***** ⁽¹⁾ : PROGRAM NUMBER 00 : P1 - 1 01 : P1 - 2 02 : P1 - 3 03 : P1 - 4 04 : P1 - 5 05 : P1 - 6 06 : P1 - 7 07 : P1 - 8 08 : P2 - 1 09 : P2 - 2 10 : P2 - 3 11 : P2 - 4 12 : P2 - 5 13 : P2 - 6 14 : P2 - 7 15 : P2 - 8 16 : P3 - 1 17 : P3 - 2 18 : P3 - 3 19 : P3 - 4 20 : P3 - 5 21 : P3 - 6 22 : P3 - 7 23 : P3 - 8 ***** ⁽²⁾ : Day of the week 00000 : SUN 00001 : MON 00002 : TUE 00003 : WED 00004 : THU 00005 : FRI 00006 : SAT 00128 : DAY 00129 : SPL 00130 : HOL 00255 : --- ***** ⁽³⁾ : Start time (Hour) 00000 ~ 00023 (Hour) 00255 : --- ***** ⁽⁴⁾ : Start time (Minute) 00000 ~ 00059 (Time) 00255 : --- ***** ⁽⁵⁾ : End time (Hour) 00000 ~ 00023 (Hour) 00255 : --- ***** ⁽⁶⁾ : End time (Minute) 00000 ~ 00059 (Time) 00255 : --- ***** ⁽⁷⁾ : Selected pattern 00001 : A 00002 : B 00003 : C 00004 : C 00016 : SKIP 00255 : --- ***** ⁽⁸⁾ : Motion detection setting 00000 : OFF 00001 : ON 00255 : --- *** ⁽⁹⁾ : Error type
TIMER PROGRAM SETTINGS ALARM MODE	<Menu setting> DW,***** ⁽¹⁾ ***** ⁽²⁾ ^[#1] <Inquiry for setting information> DR,***** ⁽¹⁾ ^[#1]	<Writing of menu information> RC ^[#2] EX,*** ⁽³⁾ DW,***** ⁽¹⁾ ***** ⁽²⁾ ^[#2] <Reading of menu information> RC ^[#2] EX,*** ⁽³⁾ DR,***** ⁽¹⁾ ***** ⁽²⁾ ^[#2]	***** ⁽¹⁾ : 05284 ~ 05287 05284 : A 05285 : B 05286 : C 05287 : D ***** ⁽²⁾ : 00000 : ALL 00001 : ALARM 00002 : ALARM PLUS *** ⁽³⁾ : Error type
TIMER PROGRAM SETTINGS DAY OF THE WEEK START DAY	↑	↑	***** ⁽¹⁾ : 04400 ~ 04402 04400 : P1 04401 : P2 04402 : P3 ***** ⁽²⁾ : 00000 : SUN 00001 : MON 00002 : TUE 00003 : WED 00004 : THU 00005 : FRI 00006 : SAT *** ⁽³⁾ : Error type
TIMER PROGRAM SETTINGS DAY OF THE WEEK END DAY	↑	↑	***** ⁽¹⁾ : 04416 ~ 04418 04416 : P1 04417 : P2 04418 : P3 ***** ⁽²⁾ : 00000 : SUN 00001 : MON 00002 : TUE 00003 : WED 00004 : THU 00005 : FRI 00006 : SAT *** ⁽³⁾ : Error type
HOLIDAY SETTING	↑	↑	***** ⁽¹⁾ : 04432 ~ 04471 04432 : Month 04433 : Date (1 - 1) 04434 : Month 04435 : Date (1 - 2) 04436 : Month 04437 : Date (1 - 3) 04438 : Month 04439 : Date (1 - 4) 04440 : Month 04441 : Date (2 - 1) 04442 : Month 04443 : Date (2 - 2) 04444 : Month 04445 : Date (2 - 3) 04446 : Month 04447 : Date (2 - 4) 04448 : Month 04449 : Date (3 - 1) 04450 : Month 04451 : Date (3 - 2) 04452 : Month 04453 : Date (3 - 3) 04454 : Month 04455 : Date (3 - 4) 04456 : Month 04457 : Date (4 - 1) 04458 : Month 04459 : Date (4 - 2) 04460 : Month 04461 : Date (4 - 3) 04462 : Month 04463 : Date (4 - 4) 04464 : Month 04465 : Date (5 - 1) 04466 : Month 04467 : Date (5 - 2) 04468 : Month 04469 : Date (5 - 3) 04470 : Month 04471 : Date (5 - 4) ***** ⁽²⁾ : Month : 00001 ~ 00012 00025 : NONE Date : 00001 ~ 00031 00025 : NONE *** ⁽³⁾ : Error type

Command codes (continued)

• RS-232C [Direct operation specification] menu setting system command form

<TIMER PROGRAM SETTINGS> (Continued)

Menu	Commands	Status	Notes
TIMER PROGRAM SETTINGS REC MODE	<Menu setting> DW,***** ⁽¹⁾ ***** ⁽²⁾ [F1] <Inquiry for setting information> DR,***** ⁽¹⁾ [F1]	<Writing of menu information> RC [F2] EX,*** ⁽³⁾ DW,***** ⁽¹⁾ ***** ⁽²⁾ [F2] <Reading of menu information> RC [F2] EX,*** ⁽³⁾ DR,***** ⁽¹⁾ ***** ⁽²⁾ [F2]	***** ⁽¹⁾ : 04480 : A 04482 : B 04484 : C 04486 : D ***** ⁽²⁾ : 00000 : NORMAL & ALARM 00001 : PRE ALARM *** ⁽³⁾ : Error type
TIMER PROGRAM SETTINGS PPS	↑	↑	***** ⁽¹⁾ : 04560 ~ 04595 04560 : A - CH1 04561 : A - CH2 04562 : A - CH3 04563 : A - CH4 04564 : A - CH5 04565 : A - CH6 04566 : A - CH7 04567 : A - CH8 04568 : A - CH9 04569 : B - CH1 04570 : B - CH2 04571 : B - CH3 04572 : B - CH4 04573 : B - CH5 04574 : B - CH6 04575 : B - CH7 04576 : B - CH8 04577 : B - CH9 04578 : C - CH1 04579 : C - CH2 04580 : C - CH3 04581 : C - CH4 04582 : C - CH5 04583 : C - CH6 04584 : C - CH7 04585 : C - CH8 04586 : C - CH9 04587 : D - CH1 04588 : D - CH2 04589 : D - CH3 04590 : D - CH4 04591 : D - CH5 04592 : D - CH6 04593 : D - CH7 04594 : D - CH8 04595 : D - CH9 ***** ⁽²⁾ : 65535 : - - - - - 00001 : 25P 00002 : 12.5P 00003 : 8.333P 00004 : 6.25P 00005 : 5P 00006 : 4.167P 00008 : 3.125P 00010 : 2.5P 00025 : 1P 00050 : 0.5P 00100 : 0.25P 00200 : 0.125P *** ⁽³⁾ : Error type
TIMER PROGRAM SETTINGS GRADE	↑	↑	***** ⁽¹⁾ : 04688 ~ 04723 04688 : A - CH1 04689 : A - CH2 04690 : A - CH3 04691 : A - CH4 04692 : A - CH5 04693 : A - CH6 04694 : A - CH7 04695 : A - CH8 04696 : A - CH9 04697 : B - CH1 04698 : B - CH2 04699 : B - CH3 04700 : B - CH4 04701 : B - CH5 04702 : B - CH6 04703 : B - CH7 04704 : B - CH8 04705 : B - CH9 04706 : C - CH1 04707 : C - CH2 04708 : C - CH3 04709 : C - CH4 04710 : C - CH5 04711 : C - CH6 04712 : C - CH7 04713 : C - CH8 04714 : C - CH9 04715 : D - CH1 04716 : D - CH2 04717 : D - CH3 04718 : D - CH4 04719 : D - CH5 04720 : D - CH6 04721 : D - CH7 04722 : D - CH8 04723 : D - CH9 ***** ⁽²⁾ : 00000 : SUPER 00001 : HIGH 00002 : STD(STANDARD) 00003 : BASIC 00004 : LONG *** ⁽³⁾ : Error type
TIMER PROGRAM SETTINGS A-PPS	↑	↑	***** ⁽¹⁾ : 04624 ~ 04659 04624 : A - CH1 04625 : A - CH2 04626 : A - CH3 04627 : A - CH4 04628 : A - CH5 04629 : A - CH6 04630 : A - CH7 04631 : A - CH8 04632 : A - CH9 04633 : B - CH1 04634 : B - CH2 04635 : B - CH3 04636 : B - CH4 04637 : B - CH5 04638 : B - CH6 04639 : B - CH7 04640 : B - CH8 04641 : B - CH9 04642 : C - CH1 04643 : C - CH2 04644 : C - CH3 04645 : C - CH4 04646 : C - CH5 04647 : C - CH6 04648 : C - CH7 04649 : C - CH8 04650 : C - CH9 04651 : D - CH1 04652 : D - CH2 04653 : D - CH3 04654 : D - CH4 04655 : D - CH5 04656 : D - CH6 04657 : D - CH7 04658 : D - CH8 04659 : D - CH9 ***** ⁽²⁾ : 65535 : - - - - - 00001 : 25P 00002 : 12.5P 00003 : 8.333P 00004 : 6.25P 00005 : 5P 00006 : 4.167P 00008 : 3.125P 00010 : 2.5P 00025 : 1P 00050 : 0.5P 00100 : 0.25P 00200 : 0.125P *** ⁽³⁾ : Error type

• RS-232C [Direct operation specification] menu setting system command form

<TIMER PROGRAM SETTINGS> (Continued)

Menu	Commands	Status	Notes
TIMER PROGRAM SETTINGS A-GRADE	<Menu setting> DW,***** ⁽¹⁾ ***** ⁽²⁾ [#1] <Inquiry for setting information> DR,***** ⁽¹⁾ [#1]	<Writing of menu information> RC [#2]EX,★★ ⁽³⁾ DW,***** ⁽¹⁾ <Reading of menu information> RC [#2]EX,★★ ⁽³⁾ DR,***** ⁽¹⁾ ***** ⁽²⁾ [#2]	***** ⁽¹⁾ : 04752 ~ 04787 04752 : A - CH1 04753 : A - CH2 04754 : A - CH3 04755 : A - CH4 04756 : A - CH5 04757 : A - CH6 04758 : A - CH7 04759 : A - CH8 04760 : A - CH9 04761 : B - CH1 04762 : B - CH2 04763 : B - CH3 04764 : B - CH4 04765 : B - CH5 04766 : B - CH6 04767 : B - CH7 04768 : B - CH8 04769 : B - CH9 04770 : C - CH1 04771 : C - CH2 04772 : C - CH3 04773 : C - CH4 04774 : C - CH5 04775 : C - CH6 04776 : C - CH7 04777 : C - CH8 04778 : C - CH9 04779 : D - CH1 04780 : D - CH2 04781 : D - CH3 04782 : D - CH4 04783 : D - CH5 04784 : D - CH6 04785 : D - CH7 04786 : D - CH8 04787 : D - CH9 ***** ⁽²⁾ : 00000 : SUPER 00001 : HIGH 00002 : STD(STANDARD) 00003 : BASIC 00004 : LONG ★★ ⁽³⁾ : Error type
TIMER PROGRAM SETTINGS ALARM REC DURATION	↑	↑	***** ⁽¹⁾ : 04102 ***** ⁽²⁾ : 00000 ~ 03600 00000 : MAN 00002 : 2S 00005 : 5S 00010 : 10S 00015 : 15S 00030 : 30S 00045 : 45S 00060 : 1M 00120 : 2M 00300 : 5M 00600 : 10M 01200 : 20M 01800 : 30M 03600 : 60M ★★ ⁽³⁾ : Error type
TIMER PROGRAM SETTINGS PRE ALARM REC	↑	↑	***** ⁽¹⁾ : 04103 ***** ⁽²⁾ : 00001 ~ 00003 00001 : SHORT 00002 : MEDIUM 00003 : LONG ★★ ⁽³⁾ : Error type

Command codes (continued)

• RS-232C [Direct operation specification] menu setting system command form

<INITIAL SET UP/INFORMATION>

Menu	Commands	Status	Notes
HDD REPEAT REC	<Menu setting> DW,***** ⁽¹⁾ ***** ⁽²⁾ ^[#1] <Inquiry for setting information> DR,***** ⁽¹⁾ ^[#1]	<Writing of menu information> RC ^[#2] EX,*** ⁽³⁾ DW,***** ⁽¹⁾ ***** ⁽²⁾ ^[#2] <Reading of menu information> RC ^[#2] EX,*** ⁽³⁾ DR,***** ⁽¹⁾ ***** ⁽²⁾ ^[#2]	***** ⁽¹⁾ : 04832 ***** ⁽²⁾ : 00000 : OFF 00001 : ON 00002 : STANDBY ** ⁽³⁾ : Error type
HDD REPEAT PLAY	↑	↑	***** ⁽¹⁾ : 04834 ***** ⁽²⁾ : 00000 : OFF 00001 : ON ** ⁽³⁾ : Error type
IM-CHECK PLAY	↑	↑	***** ⁽¹⁾ : 04821 ***** ⁽²⁾ : 00000 : OFF 00001 : ON ** ⁽³⁾ : Error type
SEQUENTIAL PLAY	↑	↑	***** ⁽¹⁾ : 04822 ***** ⁽²⁾ : 00000 : OFF 00001 : ON ** ⁽³⁾ : Error type
AUDIO RECORDING	↑	↑	***** ⁽¹⁾ : 04817 ***** ⁽²⁾ : 00000 : OFF 00001 : ON 00002 : ALARM ** ⁽³⁾ : Error type
MODE OUT	↑	↑	***** ⁽¹⁾ : 04848 ~ 04851 04848 : MODE OUT 1 04849 : MODE OUT 2 04850 : MODE OUT 3 04851 : MODE OUT 4 ***** ⁽²⁾ : 00000 : OFF 00001 : REC 00002 : PLAY 00003 : REMAIN 00004 : POWR 00006 : MOTION 00009 : ALARM ** ⁽³⁾ : Error type
KEY SOUND	↑	↑	***** ⁽¹⁾ : 04853 ***** ⁽²⁾ : 00000 : OFF 00001 : ON ** ⁽³⁾ : Error type
BUZZER	↑	↑	***** ⁽¹⁾ : 04855 ***** ⁽²⁾ : 00000 : OFF 00001 : REMAIN 00002 : WARNING 00003 : ALARM ** ⁽³⁾ : Error type
REMAIN HDD DEVICE	↑	↑	***** ⁽¹⁾ : 04864 ***** ⁽²⁾ : 00000 : OFF 00001 : HDD ** ⁽³⁾ : Error type
REMAIN HDD	↑	↑	***** ⁽¹⁾ : 04865 ***** ⁽²⁾ : 00002 : 2% 00004 : 4% 00006 : 6% 00008 : 8% 00010 : 10% 00015 : 15% 00020 : 20% 00030 : 30% 00040 : 40% 00050 : 50% ** ⁽³⁾ : Error type
HDD REMAIN	↑	↑	***** ⁽¹⁾ : 04880 ***** ⁽²⁾ : 00002 : 2% 00004 : 4% 00006 : 6% 00008 : 8% 00010 : 10% 00015 : 15% 00020 : 20% 00030 : 30% 00040 : 40% 00050 : 50% 00255 : OFF ** ⁽³⁾ : Error type
EMERGENCY REC DURATION	↑	↑	***** ⁽¹⁾ : 04102 ***** ⁽²⁾ : 00000 ~ 03600 00060 : 1M 00120 : 2M 00300 : 5M 00600 : 10M 01200 : 20M 01800 : 30M 03600 : 60M ** ⁽³⁾ : Error type
HDD FULL	↑	↑	***** ⁽¹⁾ : 05360 ***** ⁽²⁾ : 00000 : OFF 00001 : ON ** ⁽³⁾ : Error type

• RS-232C [Direct operation specification] menu setting system command form
 <INITIAL SET UP/INFORMATION> (Continued)

Menu	Commands	Status	Notes
RS-232C MODE	<Menu setting> DW,***** ⁽¹⁾ ***** ⁽²⁾ [#1] <Inquiry for setting information> DR,***** ⁽¹⁾ [#1]	<Writing of menu information> RC [#2] EX, ** ⁽³⁾ DW, ***** ⁽¹⁾ ***** ⁽²⁾ [#2] <Reading of menu information> RC [#2] EX, ** ⁽³⁾ DR, ***** ⁽¹⁾ ***** ⁽²⁾ [#2]	***** ⁽¹⁾ : 04896 ***** ⁽²⁾ : 00000 : OFF 00001 : REMOTE A 00002 : REMOTE B ** ⁽³⁾ : Error type
RS-232C SETTINGS TRANSMISSION RATE	↑	↑	***** ⁽¹⁾ : 04912 ***** ⁽²⁾ : 01200 : 1200 02400 : 2400 04800 : 4800 09600 : 9600 19200 : 19200 ** ⁽³⁾ : Error type
RS-232C SETTINGS DATA BIT LENGTH	↑	↑	***** ⁽¹⁾ : 04913 ***** ⁽²⁾ : 00007 : 7 BIT 00008 : 8 BIT ** ⁽³⁾ : Error type
RS-232C SETTINGS PARITY BIT	↑	↑	***** ⁽¹⁾ : 04914 ***** ⁽²⁾ : 00000 : NONE 00001 : ODD 00002 : EVEN ** ⁽³⁾ : Error type
RS-232C SETTINGS STOP BIT LENGTH	↑	↑	***** ⁽¹⁾ : 04915 ***** ⁽²⁾ : 00001 : 1 BIT 00002 : 2 BIT ** ⁽³⁾ : Error type
RS-232C SETTINGS DELIMITER	↑	↑	***** ⁽¹⁾ : 04916 ***** ⁽²⁾ : 00000 : CR 00001 : CR+LF ** ⁽³⁾ : Error type

Command codes (continued)

• RS-232C [Direct operation specification] menu setting system command form

<SEARCH>

Refer to the playback of [Direct operation specification] operation setting system command form for search execution.

Menu	Commands	Status	Notes
TIME DATE SEARCH	<Menu setting> DW,***** ⁽¹⁾ ***** ⁽²⁾ [F1] <Inquiry for setting information> DR,***** ⁽¹⁾ [F1]	<Writing of menu information> RC [F2] EX, ** ⁽³⁾ DW, ***** ⁽¹⁾ ***** ⁽²⁾ [F2] <Reading of menu information> RC [F2] EX, ** ⁽³⁾ DR, ***** ⁽¹⁾ ***** ⁽²⁾ [F2]	***** ⁽¹⁾ : 05044 : Search time (Year) 05045 : Search time (Month) 05046 : Search time (Day) 05047 : Search time (Hour) 05048 : Search time (Minute) 05049 : Search time (Second) ***** ⁽²⁾ : Year : 00001 ~ 00099 Month : 00001 ~ 00012 Day : 00001 ~ 00031 Hour : 00001 ~ 00023 Minute : 00000 ~ 00059 Second : 00000 ~ 00059 ** ⁽³⁾ : Error type
INDEX SEARCH	↑	↑	***** ⁽¹⁾ : 05072 ***** ⁽²⁾ : 00001 ~ 00099 ** ⁽³⁾ : Error type
ALARM INDEX SEARCH	↑	↑	***** ⁽¹⁾ : 05088 ***** ⁽²⁾ : 00001 ~ 00099 ** ⁽³⁾ : Error type
ALARM LIST SEARCH DATE/TIME	↑	↑	***** ⁽¹⁾ : 05060 : List time mask (Year) 05061 : List time mask (Month) 05062 : List time mask (Day) 05063 : List time mask (Hour) 05064 : List time mask (Minute) 05065 : List time mask (Second) ***** ⁽²⁾ : Year : 00001 ~ 00099 Month : 00001 ~ 00012 Day : 00001 ~ 00031 Hour : 00001 ~ 00023 Minute : 00000 ~ 00059 Second : 00000 ~ 00059 None mask : 00238 ** ⁽³⁾ : Error type
SEARCH TYPE	<Inquiry for setting information> DR,***** ⁽¹⁾ [F1]	<Reading of menu information> RC [F2] EX, ** ⁽³⁾ DR, ***** ⁽¹⁾ ***** ⁽²⁾ [F2]	***** ⁽¹⁾ : 05057 ***** ⁽²⁾ : 00000 : TIME DATE 00001 : INDEX 00002 : ALARM INDEX 00003 : ALARM SKIP 00004 : ALARM LIST ** ⁽³⁾ : Error type
PLAY DEVICE	<Menu setting> DW,***** ⁽¹⁾ ***** ⁽²⁾ [F1] <Inquiry for setting information> DR,***** ⁽¹⁾ [F1]	<Writing of menu information> RC [F2] EX, ** ⁽³⁾ DW, ***** ⁽¹⁾ ***** ⁽²⁾ [F2] <Reading of menu information> RC [F2] EX, ** ⁽³⁾ DR, ***** ⁽¹⁾ ***** ⁽²⁾ [F2]	***** ⁽¹⁾ : 05056 ***** ⁽²⁾ : 00001 : HDD 00003 : CFC ** ⁽³⁾ : Error type
SELECTION CAMERA NO.	↑	↑	***** ⁽¹⁾ : 05058 ***** ⁽²⁾ : 00000 : CH1 00001 : CH2 00002 : CH3 00003 : CH4 00004 : CH5 00005 : CH6 00006 : CH7 00007 : CH8 00008 : CH9 00032 : ALL ** ⁽³⁾ : Error type

• RS-232C [Direct operation specification] menu setting system command form

<COPY>

Menu	Commands	Status	Notes
COPY DIRECTION	<Inquiry for setting information> DR.***** ⁽¹⁾ [#1]	<Reading of menu information> RC [#2] EX, ** ⁽³⁾ DR, ***** ⁽¹⁾ ***** ⁽²⁾ [#2]	***** ⁽¹⁾ : 05120 ***** ⁽²⁾ : 00000 : HDD → CFC 00001 : CFC → HDD ** ⁽³⁾ : Error type
COPY MODE	<Menu setting> DW.***** ⁽¹⁾ ***** ⁽²⁾ [#1] <Inquiry for setting information> DR.***** ⁽¹⁾ [#1]	<Writing of menu information> RC [#2] EX, ** ⁽³⁾ DW, ***** ⁽¹⁾ ***** ⁽²⁾ [#2] <Reading of menu information> RC [#2] EX, ** ⁽³⁾ DR, ***** ⁽¹⁾ ***** ⁽²⁾ [#2]	***** ⁽¹⁾ : 05121 ***** ⁽²⁾ : 00000 : OVERWRITE 00001 : FIFO ** ⁽³⁾ : Error type
COPY START/END	↑	↑	***** ⁽¹⁾ : 05136 : Copy start time (Year) 05137 : Copy start time (Month) 05138 : Copy start time (Day) 05139 : Copy start time (Hour) 05140 : Copy start time (Minute) 05141 : Copy start time (Second) 05142 : Copy end time (Year) 05143 : Copy end time (Month) 05144 : Copy end time (Day) 05145 : Copy end time (Hour) 05146 : Copy end time (Minute) 05147 : Copy end time (Second) ***** ⁽²⁾ : Year : 00001 ~ 00099 Month : 00001 ~ 00012 Day : 00001 ~ 00031 Hour : 00001 ~ 00023 Minute : 00000 ~ 00059 Second : 00000 ~ 00059 ** ⁽³⁾ : Error type
COPY TRANSFER PERIOD	↑	↑	***** ⁽¹⁾ : 05126 ***** ⁽²⁾ : 00000 : START•END 00001 : START ** ⁽³⁾ : Error type
RESTORE MODE	↑	↑	***** ⁽¹⁾ : 05152 ***** ⁽²⁾ : 00000 : OVERWRITE 00001 : FIFO ** ⁽³⁾ : Error type
RESTORE START/END	↑	↑	***** ⁽¹⁾ : 05168 : Restore start time (Year) 05169 : Restore start time (Month) 05170 : Restore start time (Day) 05171 : Restore start time (Hour) 05172 : Restore start time (Minute) 05173 : Restore start time (Second) 05174 : Restore end time (Year) 05175 : Restore end time (Month) 05176 : Restore end time (Day) 05177 : Restore end time (Hour) 05178 : Restore end time (Minute) 05179 : Restore end time (Second) ***** ⁽²⁾ : Year : 00001 ~ 00099 Month : 00001 ~ 00012 Day : 00001 ~ 00031 Hour : 00001 ~ 00023 Minute : 00000 ~ 00059 Second : 00000 ~ 00059 ** ⁽³⁾ : Error type
RESTORE TRANSFER PERIOD	↑	↑	***** ⁽¹⁾ : 05126 ***** ⁽²⁾ : 00000 : START•END 00001 : START ** ⁽³⁾ : Error type

• RS-232C [Direct operation specification] menu setting system command form

<ANOTHER SETTINGS>

Menu	Commands	Status	Notes
RECORDING PATTERN	<Inquiry for setting information> DR,***** ⁽¹⁾ ^{#1}	<Writing of menu information> RC ^{#2} EX,*** ⁽³⁾ DR,***** ⁽¹⁾ ***** ⁽²⁾ ^{#2}	***** ⁽¹⁾ : 05268 ***** ⁽²⁾ : 00000 : NORMAL *** ⁽³⁾ : Error type
CHECK THE CONDITION	MD?	RC ^{#2} EX,*** ⁽²⁶⁾ MD,*** ⁽¹⁾ *** ⁽²⁾ *** ⁽³⁾ *** ⁽⁴⁾ *** ⁽⁵⁾ *** ⁽⁶⁾ *** ⁽⁷⁾ *** ⁽⁸⁾ *** ⁽⁹⁾ *** ⁽¹⁰⁾ *** ⁽¹¹⁾ *** ⁽¹²⁾ *** ⁽¹³⁾ *** ⁽¹⁴⁾ *** ⁽¹⁵⁾ *** ⁽¹⁶⁾ *** ⁽¹⁷⁾ *** ⁽¹⁸⁾ *** ⁽¹⁹⁾ *** ⁽²⁰⁾ *** ⁽²¹⁾ *** ⁽²²⁾ *** ⁽²³⁾ *** ⁽²⁴⁾ *** ⁽²⁵⁾ ^{#2} (Each status corresponds to the last two digits of each operating mode within the condition change notification system.)	*** ⁽¹⁾ : System condition *** ⁽²⁾ : Key lock condition *** ⁽³⁾ : Remote / local condition *** ⁽⁴⁾ : Timer condition *** ⁽⁵⁾ : Alarm interrupt condition ***** ⁽⁶⁾ : Menu condition *** ⁽⁷⁾ : Recording condition *** ⁽⁸⁾ : Playback condition *** ⁽⁹⁾ : Display condition *** ⁽¹⁰⁾ : Motion detection condition *** ⁽¹¹⁾ : Back up condition *** ⁽¹²⁾ : Copy condition *** ⁽¹³⁾ : Restore condition *** ⁽¹⁴⁾ : Device control condition *** ⁽¹⁵⁾ : Acquire information condition *** ⁽¹⁶⁾ : Delete device condition *** ⁽¹⁷⁾ : Data reset condition *** ⁽¹⁸⁾ ~ *** ⁽²⁵⁾ : Reserved *** ⁽²⁶⁾ : Error type
CHECK THE CONDITION	ME?	RC ^{#2} EX,*** ⁽²⁶⁾ ME,*** ⁽¹⁾ *** ⁽²⁾ *** ⁽³⁾ *** ⁽⁴⁾ *** ⁽⁵⁾ *** ⁽⁶⁾ *** ⁽⁷⁾ *** ⁽⁸⁾ *** ⁽⁹⁾ *** ⁽¹⁰⁾ *** ⁽¹¹⁾ *** ⁽¹²⁾ *** ⁽¹³⁾ *** ⁽¹⁴⁾ *** ⁽¹⁵⁾ *** ⁽¹⁶⁾ *** ⁽¹⁷⁾ *** ⁽¹⁸⁾ *** ⁽¹⁹⁾ *** ⁽²⁰⁾ *** ⁽²¹⁾ *** ⁽²²⁾ *** ⁽²³⁾ *** ⁽²⁴⁾ *** ⁽²⁵⁾ ^{#2} (Each status corresponds to the last two digits of each operating mode within the condition change notification system.)	*** ⁽¹⁾ : System condition *** ⁽²⁾ : Key lock condition *** ⁽³⁾ : Remote / local condition *** ⁽⁴⁾ : Timer condition *** ⁽⁵⁾ : Alarm interrupt condition ***** ⁽⁶⁾ : Menu condition *** ⁽⁷⁾ : Recording condition *** ⁽⁸⁾ : Playback condition *** ⁽⁹⁾ : Display condition *** ⁽¹⁰⁾ : Motion detection condition *** ⁽¹¹⁾ : Back up condition *** ⁽¹²⁾ : Copy condition *** ⁽¹³⁾ : Restore condition *** ⁽¹⁴⁾ : Device control condition *** ⁽¹⁵⁾ : Acquire information condition *** ⁽¹⁶⁾ : Delete device condition *** ⁽¹⁷⁾ : Data reset condition *** ⁽¹⁸⁾ ~ *** ⁽²⁵⁾ : Reserved *** ⁽²⁶⁾ : Error type (When there is a lag in response time of the unit during condition change, sending this command will read RS-232C status after readying the unit for response by clearing all remaining commands in the reception buffer.)
ACQUIRE THE ELAPSED TIME	UTO?	RC ^{#2} EX,*** ⁽²⁾ UTO?,***** *** ⁽¹⁾ ^{#2}	***** ⁽¹⁾ : Elapsed time 0000000000 ~ 9999999999 (Hour) *** ⁽²⁾ : Error type
WRITE COMMENT DATA INFORMATION	COMD,*** ⁽¹⁾ *** ⁽²⁾ ***** ***** ⁽³⁾ ^{#1}	RC ^{#2} EX,*** ⁽⁴⁾ COMD,*** ⁽¹⁾ *** ⁽²⁾ ***** ***** ⁽³⁾ ^{#2}	*** ⁽¹⁾ : Camera number 00 : CH1 01 : CH2 02 : CH3 03 : CH4 04 : CH5 05 : CH6 06 : CH7 07 : CH8 08 : CH9 *** ⁽²⁾ : Character size (00 - 32) ***** *** ⁽³⁾ : Comment *** ⁽⁴⁾ : Error type
WRITE COMMENT	COMS,*** ⁽¹⁾ ^{#1}	RC ^{#2} EX,*** ⁽²⁾ COMS,*** ⁽¹⁾ ^{#2}	*** ⁽¹⁾ : Camera number 00 : CH1 01 : CH2 02 : CH3 03 : CH4 04 : CH5 05 : CH6 06 : CH7 07 : CH8 08 : CH9 *** ⁽²⁾ : Error type
DELETE THE COMMENT DISPLAY	DC ^{#1}	RC ^{#2} EX,*** ⁽²⁾ 00DC ^{#2}	

• RS-232C [False operation panel] command form

Button	Commands	Status	Notes
POWER	KKP0	RC EX,★★ ⁽²⁾ KKP0	POEWR ON/OFF ★★ ⁽²⁾ : Error type
REC/STOP	KKR0 KKR1	RC EX,★★ ⁽²⁾ KKR0 RC EX,★★ ⁽²⁾ KKR1	RECORDING STOP RECORDING ★★ ⁽²⁾ : Error type
STOP	KKB0	RC EX,★★ ⁽²⁾ KKB0	STOP PLAYBACK ★★ ⁽²⁾ : Error type
PLAY	KKB1	RC EX,★★ ⁽²⁾ KKB1	PLAYBACK ★★ ⁽²⁾ : Error type
REV.PLAY (REVERSE PLAY)	KKB2	RC EX,★★ ⁽²⁾ KKB2	REVERSE PLAYBACK ★★ ⁽²⁾ : Error type
PAUSE	KKB4	RC EX,★★ ⁽²⁾ KKB4	PAUSE ★★ ⁽²⁾ : Error type
TIMER	KKT0 KKT1	RC EX,★★ ⁽²⁾ KKT0 RC EX,★★ ⁽²⁾ KKT1	TIMER ON TIMER OFF ★★ ⁽²⁾ : Error type
ZOOM	KKZ	RC EX,★★ ⁽²⁾ KKZ	ZOOM ★★ ⁽²⁾ : Error type
SPLIT/SEQUENCE	KKE	RC EX,★★ ⁽²⁾ KKE	SPLIT / SEQUENCE ★★ ⁽²⁾ : Error type
Camera number	KKD01 KKD02 KKD03 KKD04 KKD05 KKD06 KKD07 KKD08 KKD09	RC EX,★★ ⁽²⁾ KKD01 RC EX,★★ ⁽²⁾ KKD02 RC EX,★★ ⁽²⁾ KKD03 RC EX,★★ ⁽²⁾ KKD04 RC EX,★★ ⁽²⁾ KKD05 RC EX,★★ ⁽²⁾ KKD06 RC EX,★★ ⁽²⁾ KKD07 RC EX,★★ ⁽²⁾ KKD08 RC EX,★★ ⁽²⁾ KKD09	CH1 CH2 CH3 CH4 CH5 CH6 CH7 CH8 CH9 ★★ ⁽²⁾ : Error type
LOCK	KKL0 KKL5	RC EX,★★ ⁽²⁾ KKL0 RC EX,★★ ⁽²⁾ KKL5	SIMPLE LOCK PASSWORD LOCK ★★ ⁽²⁾ : Error type
SET UP	KKM	RC EX,★★ ⁽²⁾ KKM	MENU ★★ ⁽²⁾ : Error type
COPY	KKC	RC EX,★★ ⁽²⁾ KKC	COPY ★★ ⁽²⁾ : Error type
SEARCH	KKK0	RC EX,★★ ⁽²⁾ KKK0	SEARCH ★★ ⁽²⁾ : Error type
WARNING RESET	KKW0 KKW5	RC EX,★★ ⁽²⁾ KKW0 RC EX,★★ ⁽²⁾ KKW5	WARNING RESET WARNING RESET 5 second pressing ★★ ⁽²⁾ : Error type
ALARM INTERRUPT	KKA	RC EX,★★ ⁽²⁾ KKA	ALARM INTERRUPT ★★ ⁽²⁾ : Error type
JOG	KKJ0 KKJ1	RC EX,★★ ⁽²⁾ KKJ0 RC EX,★★ ⁽²⁾ KKJ1	JOG right turn JOG left turn ★★ ⁽²⁾ : Error type
SHUTTLE	KKS00 KKS01 KKS02 KKS03 KKS04 KKS11 KKS12 KKS13 KKS14	RC EX,★★ ⁽²⁾ KKS00 RC EX,★★ ⁽²⁾ KKS01 RC EX,★★ ⁽²⁾ KKS02 RC EX,★★ ⁽²⁾ KKS03 RC EX,★★ ⁽²⁾ KKS04 RC EX,★★ ⁽²⁾ KKS11 RC EX,★★ ⁽²⁾ KKS12 RC EX,★★ ⁽²⁾ KKS13 RC EX,★★ ⁽²⁾ KKS14	SHUTTLE center SHUTTLE right 1 SHUTTLE right 2 SHUTTLE right 3 SHUTTLE right 4 SHUTTLE left 1 SHUTTLE left 2 SHUTTLE left 3 SHUTTLE left 4 ★★ ⁽²⁾ : Error type (Send SHUTTLE center command before send this command.)

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♦ Character code list

Character	.	(Space)	!	"	#	\$	%	&	'	(
Character code	00012	00032	00033	00034	00035	00036	00037	00038	00039	00040

Character	)	*	+	,	-	.	/			
Character code	00041	00042	00043	00044	00045	00046	00047			

Character	:	;	<	=	>	?	@			
Character code	00058	00059	00060	00061	00062	00063	00064			

Number	0	1	2	3	4	5	6	7	8	9
Character code	00048	00049	00050	00051	00052	00053	00054	00055	00056	00057

Alphabet	A	B	C	D	E	F	G	H	I	J	K	L	M
Character code	00065	00066	00067	00068	00069	00070	00071	00072	00073	00074	00075	00076	00077

Alphabet	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Character code	00078	00079	00080	00081	00082	00083	00084	00085	00086	00087	00088	00089	00090

Alphabet	a	b	c	d	e	f	g	h	i	j	k	l	m
Character code	00097	00098	00099	00100	00101	00102	00103	00104	00105	00106	00107	00108	00109

Alphabet	n	o	p	q	r	s	t	u	v	w	x	y	z
Character code	00110	00111	00112	00113	00114	00115	00116	00117	00118	00119	00120	00121	00122

Comment search

Characters (character strings) inputted from a PC connected to this unit by RS-232C connection can be recorded as comments along with the video/audio. Recorded comments can be displayed during playback. Furthermore, recorded comments can be specified for search so that the video with the comment can be played back from the beginning.

■ Comment search command code

Menu	Commands	Status	Notes
Comment search	PB** ⁽¹⁾ ** ⁽²⁾ ** ⁽³⁾ ** ⁽⁴⁾ ** ⁽⁵⁾ ** ** ⁽⁶⁾ ^{#1}	RC ^{#2} EX,** ⁽⁷⁾ PB** ⁽¹⁾ ** ⁽²⁾ ** ⁽³⁾ ** ⁽⁴⁾ ** ⁽⁵⁾ ** ** ⁽⁶⁾ ^{#2}	** ⁽¹⁾ : Comment search (80) ** ⁽²⁾ : Search direction 00 : Forward 01 : Reverse ** ⁽³⁾ : number of search time (01 ~ 99) ** ⁽⁴⁾ : Camera number 00 : CH1 01 : CH2 02 : CH3 03 : CH4 04 : CH5 05 : CH6 06 : CH7 07 : CH8 08 : CH9 ** ⁽⁵⁾ : Character size (00 - 32) ***** ** ⁽⁶⁾ : Comment ** ⁽⁷⁾ : Error type
WRITE COMMENT DATA INFORMATION	COMD,** ⁽¹⁾ ** ⁽²⁾ ** ***** ***** ⁽³⁾ ^{#1}	RC ^{#2} EX,** ⁽⁴⁾ COMD,** ⁽¹⁾ ** ⁽²⁾ ** ***** ***** ⁽³⁾ ^{#2}	** ⁽¹⁾ : Camera number 00 : CH1 01 : CH2 02 : CH3 03 : CH4 04 : CH5 05 : CH6 06 : CH7 07 : CH8 08 : CH9 ** ⁽²⁾ : Character size (00 - 32) ***** ** ⁽³⁾ : Comment ** ⁽⁴⁾ : Error type
WRITE COMMENT	COMS,** ⁽¹⁾ ^{#1}	RC ^{#2} EX,** ⁽²⁾ COMS,** ⁽¹⁾ ^{#2}	** ⁽¹⁾ : Camera number 00 : CH1 01 : CH2 02 : CH3 03 : CH4 04 : CH5 05 : CH6 06 : CH7 07 : CH8 08 : CH9 ** ⁽²⁾ : Error type
DELETE THE COMMENT DISPLAY	DC ^{#1}	RC ^{#2} EX,** ⁽²⁾ 00DC ^{#2}	

■ Characters can be used for comment search

Alphabet	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Character	(Space)	!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/	:	;	<	=	>	?	@			
Number	0	1	2	3	4	5	6	7	8	9																

■ Sample operation

1) Record character string "ABCDEF" as a comment along with the video. (When "DELIMITER" in the <RS-232C SETTING> screen is set to "CR".)

The operation is performed on a PC.

1. Set the character (or characters string) to be recorded;
2. Record the selected character(s).

By using the COMS command, characters which have been set once can be recorded any number of times. To record a different character set, use the COMD command.

➡ Up to 32 characters can be inputted.

2) Display the recorded comment.

1. Select <SETTINGS> → "CAMERA DISPLAY" in the <TIME DATE/DISPLAY SETTINGS> screen. Display "COMMENT" and confirm.

➡ The number of characters displayed on the screen : all 32 for single screen, first 10 for SPLIT4, and first 6 for SPLIT9.

3) Skip to the scene with characters "ABCDEF". (When "DELIMITER" in the <RS-232C SETTINGS> screen is set to "CR".)

The operation is performed on a PC.

After comment search, playback is performed using single screen display.

ⓘ Comment search can be performed even when playback is stopped, during still frame playback, playback or recording.

ⓘ The unit will fast forward or rewind until it finds the character string, then shift into still frame mode.

ⓘ Comment searches may be time-consuming as the process involves searching through all the data.

➡ If the unit does not find the character string, it will stop automatically.